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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,039	05/08/2001	David Meiri	07072-128001	2160
26161	7590	06/03/2004	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			BANANKHAH, MAJID A	
			ART UNIT	PAPER NUMBER
			2127	

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,039

Applicant(s)

MEIRI, DAVID

Examiner

Majid A Banankhah

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12-12-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application filed on May 08, 2001. Claims 1-26 are considered for examination.

Claim Rejections - 35 USC § 103

2. Following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wacławski (U.S. Pat. No. 6,658,473, hereinafter Wacławski) in view of Block et al (U.S. Pat. No. 6,658,473, hereinafter Block).

Per claims 1, 13, 25, and 26 a method for evaluating computing resource of a computer (US Pat. 6,658,473, computing resource), said method comprising:

determining a score for said resource on the basis of a stochastic property of said resource (col. 8, lines 33-51, Stochastic process);

defining an interval corresponding to said resource, said interval having an extent that depends on said score (x-minutes interval, time index sets, col. 8, lines 33-51);

generating a random number; and selecting said resource if said random number is within said interval (for a fixed time, $Z(w, t)$ is a random variable, col. 8, lines 33-51, and lines 52 to col. 9, line 1-11, data extractor 206, extracts from the database 206, the time series representing a performance collected a fifteen minutes intervals).

Art Unit: 2127

The reference of while teaches of evaluating property of resource and computing resource in a computing system, fails to teach of selecting a resource from a plurality of resources, i.e. in a distributed computing environment. However, Block teaches of distributed computing environment, wherein the server capacity is determined based on the workload of each server (col. 2, lines 58- to col. 3, line 12). Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to use stochastic process of Waclawski's invention in a distributed data processing system environment of Block, for the reason to be able to select a processor based on capability of that processor among a plurality of processors.

Regarding queue and queue length in claims 13-15, and 21, 23-24 it is well known in the art to use queue and number of processes in a run queue as a measure of process utilization (See Block, col. 12, lines 51-61, For example, the operating system can provide the system load with regard to processor utilization by determining the number of processes in the run queue at any given time) for the reason that it make a measure of how busy a processor is. Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to use number of elements in a queue as a measure of estimating workload in a system because, it is a measure of business, i.e. more job in a queue, the busier the system is.

Per claims 2, and 18 the method of claim 1, wherein defining an interval corresponding to said resource comprises determining a normalized score for said resource; and defining an extent of said interval on the basis of said normalized score. In a probabilistic distributed environment, normalization is necessary as is taught by Block (see, Block, col. 14 23-42).

Art Unit: 2127

Per claims 3, and 19 the method of claim 2, wherein determining a normalized score comprises evaluating a sum of scores assigned to each resource in said plurality of resources; and normalizing said score assigned to said resource by said sum of scores (Block, col. 14, lines 23-42, see the example, server a [random generated .6] gets the session).

Per claims 4, and 20 the method of claim 1, wherein generating a random number comprises generating a uniformly distributed random number (generating random number in Block's teaching is a uniform between 0 and 1, see the example).

Per claims 5, and 22 the method of claim 1, further comprising polling a selected resource to update a prior measurement of said stochastic property associated with said resource. In the teaching of Waclawski, the performance metric is collected in time intervals and stored in a database for future use and it is done on the basis of the selected computer (Waclawski, col. 8, lines 52-60).

Per claim 6, the method of claim 1, wherein determining said score comprises estimating a present value of said stochastic property on the basis of a prior measurement of said stochastic property (after collecting the performance data generates the time series, Waclawski, col. 8, lines 52-60).

Art Unit: 2127

Per claim 7, the method of claim 6, further comprising selecting said prior measurement to be a most-recently known value of said stochastic property (Waclawski, col. 9, lines 11-26, first time series producing the second time series [which is the most recently known value]).

Per claim 8, the method of claim 1, further comprising selecting said resource to be a processor having a variable workload (Block, in distributing load in a multiple server environment, the workload is variable).

Per claim 9, the method of claim 8, wherein determining a score for said resource comprises obtaining an estimate of a present workload of said processor (see Block, col. 4, lines 21-29, current load).

Per claim 10, the method of claim 9, wherein determining a score for said resource further comprises evaluating an inverse of said estimate of said present workload of said processor (if the desirability is 8, the rang is .8).

Per claim 11, the method of claim 9, wherein obtaining an estimate of a present workload of said processor comprises retrieving, from memory, a last-known workload of said Processor (Waclawski, col. 9, lines 11-26, first time series producing the second time series [which is the most recently known value]).

Art Unit: 2127

Per claim 12, the method of claim 1, further comprising selecting said resource to be a queue having a variable queue-length. It is well known in the art to select a resource based on a queue length, as the elements in a queue will constitute the length of a queue. Therefore, it would have been obvious for

Per claims 16-17, the method of claim 15, wherein determining said effective queue-length comprises determining a priority of said queue. The system of Block teaches of a state of a session such as priority and assigning priority as a weighting factor in col. 14, line 60 to col. 15, line 7.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose voice telephone number is (703) 308-6903. A voice mail service is also available at this number.

All response sent to U.S. Mail should be mailed to:

Commissioner of Patent and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal

Art Unit: 2127

Drive, Arlington. VA, Sixth Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses to the Examiner.

All Formal or Official Faxes must be signed and sent to either (703) 308-9051 or (703) 308-9052. Official faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the office, e.g., Finance Division for fee charging, etc.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(703) 305-9600**.

Majid Banankhah

6/1/04


MAJID A. BANANKHAH
PRIMARY EXAMINER